Proposal Reviews

#258: Narrows 2 Powerplant Flow Bypass System

Yuba County Water Agency

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Initial Selection Panel Review

Research and Restoration Technical Panel Review

Sacramento Regional Review

#1 **External Scientific Review** #2

#3

Prior Performance/Next Phase Funding #1 #2

Environmental Compliance

Budget

Final Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Final Selection Panel Review

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Please provide an overall evaluation rating.

Fund	
As Is	X
In Part	-
With Conditions	-
Consider as Directed Action	-
Not Recommended	-

Amount: **\$4,280,600**

Conditions, if any, of approval (if there are no conditions, please put "None"):

None

Provide a brief explanation of your rating:

The Selection Panel recommends funding this proposal, and notes that one letter received during the public comment period supported that recommendation.

Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Initial Selection Panel Review

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Please provide an overall evaluation rating.

Explanation of Recommendation Categories: Fund

• As Is (a proposal recommended for funding as proposed)

- In Part (a proposal for which partial funding is recommended for selected project phases or components)
- With Conditions (a proposal for which funds are recommended if the applicant contractually agrees to meet the specified conditions)

Consider as Directed Action in Annual Workplan (a proposal addressing a high priority action that requires some revision followed by additional review prior to being recommended for funding)

Not Recommended (a proposal not currently recommended for funding-after revision may be considered in the future)

Note on "Amount":

For proposals recommended as Fund As Is, Fund In Part or Fund With Conditions, the dollar amount is the amount recommended by the Selection Panel.

For proposals recommended as Consider as Directed Action in Annual Workplan, the dollar amount is the amount requested by the applicant(s).

Fund	
As Is	X
In Part	-
With Conditions	-
Consider as Directed Action	-
Not Recommended	-

Amount: **\$4,280,600**

Conditions, if any, of approval (if there are no conditions, please put "None"):

None

Provide a brief explanation of your rating:

The proposal provides a structural solution to an ongoing problem created by a design omission. The structural solution will eliminate flow and temperature fluctuations from emergency and maintenance shutdowns at the Narrows 2 Hydropower Plant on the Yuba River. The project will benefit multiple species in the Yuba River, including chinook salmon and steelhead. Existing knowledge of downstream conditions and future monitoring are well integrated in the project. The Selection Panel recommends funding this proposal.

Research and Restoration Technical Panel Review:

CALFED Bay-Delta 2002 ERP PSP Research and Restoration Technical Panel Review Form

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Review:

Please provide an overall evaluation summary rating:

Superior: outstanding in all respects;

Above Average: Quality proposal, medium or high regional value, and no significant

administrative concerns;

Adequate: No serious deficiencies, no significant regional impediments, and no significant

administrative concerns;

Not Recommended: Serious deficiencies, significant regional impediments or significant

administrative concerns.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Superior	
XAbove average	The proposal provides a structural solution to an ongoing problem created by
-Adequate	a design omission. Existing knowledge of downstream conditions and future monitoring are well integrated in the project.
-Not recommended	

1. <u>Goals and Justification.</u> Does the proposal present a clear statement of goals, objectives and hypotheses? Does the proposal present a clear justification and conceptual model for the project?

Construct a flow bypass system for the Narrows 2 powerplant. The system will eliminate flow fluctuations from emergency and maintenance shutdowns at plant. The project was demonstrated to be important because of the frequency of scheduled and emergency shutdowns. These were documented: 2 per year on the average for short term shutdowns while 2 long term shutdowns occurred over the last 30 years. A similar bypass at Sly Creek Powerhouse has operated for 17 years.

The hypothesis is the flow bypass will reduce the early life stage salmon mortality that would otherwise occur from stranding or dewatering during a shutdown. Shutdowns also can cause temperature increases which will cause mortality. YCWA committed \$109 K to preliminary design studies and CALFED contributed \$300 K for the final design. The preliminaries are complete and the full-scale implementation project for \$4,280 K is warranted.

The justification of the project depends on the actual risk from unscheduled powerhouse shutdowns. Short term (less than 1 hr) emergency shutdowns average 2 per year. Two long-term (days to weeks) have occurred over 30 years. Maintenance shutdowns (6 hr) occur 2 to 3 per year. These events are frequent enough to warrant the project

2. <u>Likelihood of Success (Approach, Feasibility, Capabilities and Performance Measures).</u> Is the project likely to succeed based on the approach, feasibility and project team capabilities? Are the proposed performance measures adequate for measuring the project's success?

The approach is technically feasible. A similar system installed in Sly Creek 17 years ago operates successfully.

3. <u>Outcomes and Products.</u> Will the project advance the state of scientific knowledge in general and/or make an important contribution to the state of knowledge of the Bay-Delta Watershed? For restoration proposals, is the project likely to contribute to ecosystem restoration or species recoveries in a significant way? Will the project produce products useful to decision-makers and scientists?

Final design plans and specifications, quarterly reports and M &E plans and reports will be made available. The project will not advance scientific knowledge but it will contribute to ecosystem restoration in a significant way depending on the number of outages.

4. Cost/Benefit Comments. Is the budget reasonable and adequate for the work proposed?

Through operations and maintenance YCWA commits 25% of the \$5,566,000 of the project up to \$1,500,000. YCWA will also fund redd and fry monitoring program. The cost sharing seems reasonable. The benefits cannot be quantified from the information provided in the proposal since no information was provided on the number of fish at risk. It was noted however, that the project has benefits to the ecosystem, independent of the impact on fish.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

Regional review rated this a high priority project. However it was noted that the flow bypass was removed from the initial design due to cost. The regional review panel suggested the proponent should pay for the project. There was opposition to any action at Englegright Dam that would be perceived as precedent setting regarding future actions at the dam. The resource agencies stated that they support the action on the grounds that it is considered disposable.

6. <u>Administrative Review.</u> Were there significant concerns about the proposal with regard to the prior performance, environmental compliance and budget administrative reviews? What were they?

No significant concerns were noted. YCWA has been very responsive to contract obligations and been timely in the completion of their projects and deliverables.

Miscellaneous comments:

This is a well developed proposal with a high likelihood of success. It will go a long way to alleviating the chance of stranding and periods of rapid temperature stress to the Yuba River fish populations.

Sacramento Regional Review:

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Overall Ranking: -Low -Medium XHigh

Provide a brief summary explanation of the committee's ranking:

The panel felt it was high priority. However, one issue that has been repeatedly brought up is that this action is a component of the Narrows 2 plant that was removed from the original project during the construction to save money and so should be paid for by the proponent. Also, with the Upper Yuba Studies Program going on, there has been opposition to any action at Englebright Dam that would be perceived as precedent setting regarding future actions at Englebright Dam. The agencies have stated that they support this action on the grounds that it is considered disposable.

1. Is the project feasible based on local constraints?

XYes -No

How?

There is good communication and coordination on this project between local participants. Local participants do have a concern that is discussed above.

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

XYes -No

How?

The project will be a facilities improvement that will protect fishery resources, PSP priority Sac Region-2.

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

XYes -No

How?

Linkages exist between all lower river actions, but UYSP is not part of the coordination efforts.

4. Does the project adequately involve local people and institutions?
XYes -No
How?
Should include the UYSP entities.
Other Comments:
X

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Conflict of Interest Statements:

I have no financial interest in this proposal.

XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects; Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
XExcellent	
-Good	Preparation make this a top proposal.
-Poor	

1. <u>Goals.</u> Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

Construct a flow bypass system for the Narrows 2 powerplant. The system will eliminate flow fluctuations from emergency and maintenance shutdowns at plant. The project was demonstrated to be important because of the frequency of scheduled and emergency shutdowns. These were documented: 2 per year on the average for short term shutdowns while 2 long term shutdowns occurred over the last 30 years. A similar bypass at Sly Creek Powerhouse has operated for 17 years. This is timely.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

The hypothesis is the flow bypass will reduce the early life stage salmon mortality that would otherwise occur from stranding or dewatering during a shutdown. Shutdowns also can cause temperature increases which will cause mortality. YCWA committed \$109 K to preliminary design studies and CALFED contributed \$300 K for the final design. The preliminaries are complete and the full-scale implementation project for \$4,280 K is warranted.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

The plan for construction of the bypass is detailed and appears to follow sound engineering practices. Previously, (1999) experiments were conducted to quantify the impact short-term flow reduction. The critical flow level above which stranding is avoided was determined. In addition YCWA will fund a redd dewatering and fry standing monitoring program as outlined in Attachment A. The program is well developed will yield quantitative results. It will add to the base knowledge and be useful to decision makers when consider other dewatering and stranding projects.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

The approach is technically feasible. A similar system installed in Sly Creek 17 years ago operates successfully.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

Start up testing and evaluation will be conducted to ensure the system meets the design and performance objectives. These objectives were set from earlier biological studies connecting the flows to fish responses. Flow will be measured continuously for duration of the existing permits and agreements. Flow system criteria are established and the YCWA is developing a monitoring plan to verify fry and redds are adequately protected.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

Final design plans and specifications, quarterly reports and M &E plans and reports will be made available

7. <u>Capabilities.</u> What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Final design work will be awarded to Christensen Associates, an engineering firm with a decade of experience in water resource engineering. The principal design team of 4 members has on the average 30 yr experience each.

8. Cost/Benefit Comments. Is the budget reasonable and adequate for the work proposed?

Through operations and maintenance YCWA commits 25% of the \$5,566,000 of the project up to \$1,500,000. YCWA will also fund the redd and fry monitoring program. The const sharing seems reasonable.

Miscellaneous comments:

This is a well developed proposal with a high likelihood of success. It will go a long way to insuring catastrophic events from dewatering do not occur to the Yuba River fish populations.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Conflict of Interest Statements:

I have no financial interest in this proposal.

XCorrect -Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects; Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
XExcellent	The project provides a structural solution to an ongoing problem created by old
-Good	design flaws. Existing knowledge of downstream conditions and future
-Poor	monitoring are well integrated in the overall project.

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

There is a clear connection between new bypass facilities and improved habitat conditions in a major salmon stream. There is good follow-up to other related goals on the river.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

Uncontrolled flow fluctuations are current problems and detrimental to fish and aquatic organisms when they occur. The proposed solution meets a clear need. There remains an issue on the frequency of such uncontrolled events and whether or not they represent a

major factor impeding salmonid recovery over what length of stream.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

The project is site-specific but highly effective for improving or nearly eliminating problem flow releases. Follow-up monitoring as proposed can substantially enhance evaluation and thus extension of the results to other situations. There is an excellent base of knowledge of downstream populations and conditions. There is explicit provision also for modifying flow managment guidelines through monitoring feedback.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

Construction and subsequent flow regulation is technically feasible. The schedule of construction and operation are well thought out. The project would likely solve previous problems of uncontrolled flows while maintaining this integrated hydro system.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

The unpredictable and low frequency of past detrimental flow changes suggest it will be difficult to document improved survival under a new regulation system. The project can provide estimates of % habitat improvements but not biological response. Follow-up monitoring plans are good and take advantage of solid pre-project data. The monitoring plan anticipates changing operations as conditions warrent.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

A much improved hydraulic system for regulating flows and avoiding damaging fluctuations will be of value to the Yuba River system. Interpretation of the biological benefits will be difficult due to the low frequency of events and being able to assign cause to population changes.

7. <u>Capabilities.</u> What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

The proponents have extensive experience with managing hydro projects and construction activities. They have a good network of collaborators and consultants and have taken advantage of earlier work.

8. Cost/Benefit Comments. Is the budget reasonable and adequate for the work proposed?

The cost is high but benefits will extend for many years and may not be obvious due to high natural variability and other problems in the system.

Miscellaneous comments:

This project continues a long-term plan of improving conditions on this remaining section of an important salmon river.

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

Conflict of Interest Statements:

I have no financial interest in this proposal.

XCorrect -Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects; Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
X Excellent	If it is desired to assure no possible chance of any possible adverse impacts on
-Good	salmonind stocks downstream of dam as a result of flow fluctuations or
-Poor	temperature increases

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

Yes, the goals, objectives and hypotheses are clearly stated and internally consistent. Importance relates to levels of risk which appear low, but could have large consequences if they occur.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

Yes, biologically, if it is important at assure that there is no chance that a powerhouse outage will adversely impact downstream salmonid stocks at any time of the year, either through flow fluctuations or water temperature increases. It is not easy to determine an acceptance of risk level as it varies by individual.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

This is a construction project and won't increase state of knowledge about potential adverse impacts of water fluctuation or decreases in water temeperature on salmonid stocks downstream of the project.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

Yes.

5. <u>Project-Specific Performance Measures.</u> Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

Based on past occurrences, it does not appear that fluctuation of flow in the lower Yuba River is likely due to unplanned powerhouse outages. The value of the project appears related more to avoiding any chance of adverse risk. It is not clear what were the historic water temepratures in the river downstream of the and whether the bypass flow proposed significantly changes them.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

It depends on the likihood of avoiding powerhouse outages, which appear low.

7. <u>Capabilities.</u> What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Unknown.

8. <u>Cost/Benefit Comments.</u> Is the budget reasonable and adequate for the work proposed?

Unknown.

Miscellaneous comments:

Prior Performance/Next Phase Funding: #1

New Proposal Number: 258

New Proposal Title: Narrows 2 Powerplant Flow Bypass System

1. Prior CALFED project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

ERP 98-N03 - Life History and Stock Composition of Steelhead

2. Prior CVPIA project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

N/A

3. Have negotiations about contracts or contact amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

If no, please explain deficiencies:

Steelhead Trapping by Jones Stokes & Associates is indefinately halted due to Endangered Species permitting delays.

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

-Yes -No -N/A
If no, please explain:

N/A

Other Comments:

The work is being subcontracted to Jones & Stokes Associates. Yuba County Water Agency has not been heavily involved in project management.

Prior Performance/Next Phase Funding: #2

New Proposal Number: 258

New Proposal Title: Narrows 2 Powerplant Flow Bypass System

1. Prior CALFED project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

Life history and Stock Composition of Steelhead Trout Proposal # ERP-98-NO3 This is a joint CALFED/AFRP funded contract

2. Prior CVPIA project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

Narrows Hydro Power Plant Bypass Facilities Contract # 11332-1-J010 Life history and Stock Composition of Steelhead Trout Contract # 11332-9-GO11

3. Have negotiations about contracts or contact amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

XYes -No -N/A

If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

-Yes XNo -N/A

If no, please explain any inaccuracies:

YCWA lists the first phase of this project as being funded by CALFED. It is funded by the CVPIA/AFRP, contract # 11332-1-J010.

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

XYes -No -N/A

If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

XYes -No -N/A

If no, please explain deficiencies:

YCWA has been very responsive to contract obligations and have been timely in of their projects and deliverables.	the completion
Other Comments:	
If no, please explain:	
XYes -No -N/A	
7. Will the project(s) be ready for next phase funding in 2002, based on its current perpenditure rates?	progress and

Environmental Compliance:

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

1. Are the legal or regulatory issues that affect the proposal identified adequately in the proposal?

XYes -No

If no, please explain:

CESA compliance necessary due to presence of spring-run chinook, need to obtain 2081/Incidental Take Permit and Scientific Collecting Permit.

Applicant should list "required" next to "Other" under both State and Federal Approvals and Permits on the Environmental Checklist because they will be obtaining various permits as described on page 11 of the project description.

2. Does the project's timeline and budget reflect adequate planning to address legal and regulatory issues that affect the proposal?

XYes -No

If no, please explain:

Budget and timelines for obtaining permits and environmental documentation is adequate.

3. Do the legal and regulatory issues that affect the proposal significantly impair the project's feasibility?

-Yes XNo

If yes, please explain:

Need to obtain Scientific Collecting Permit and 2081/Incidental Take Permit. All other permits and environmental documentation will be obtained.

Other Comments:

Budget:

Proposal Number: 258

Applicant Organization: Yuba County Water Agency

Proposal Title: Narrows 2 Powerplant Flow Bypass System

1. Does the proposal include a detailed budget for each year of requested support?

XYes -No

If no, please explain:

One year proposal

2. Does the proposal include a detailed budget for each task identified?

-Yes XNo

If no, please explain:

Appers to be very little detail.

3. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs?

XYes -No

If no, please explain:

It clearly states no rates are figured into this proposal.

4. Are appropriate project management costs clearly identified?

-Yes XNo

If no, please explain:

I don't understand the references

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

-Yes XNo

If no, please explain (for example, are costs to be reimbursed by cost share funds included in the budget summary).

17A = \$4,174.950.00

Budget Summary Total = \$4,280,600.00

6. Does the budget justification adequately explain major expenses?

-Yes XNo

If no, please explain:

references to amounts are fague and without detailed explanations.

7. Are there other budget issues that warrant consideration?

XYes -No

If yes, please explain:

I may have misunderstood this proposal, but I think there needs to be a better break down of costs.

Other Comments: